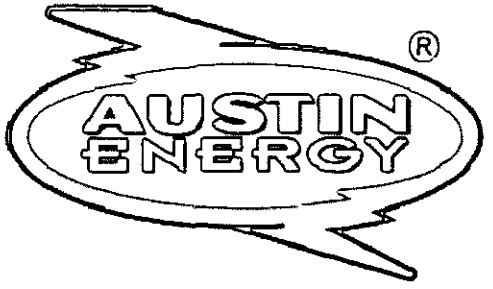
Late Backup 002



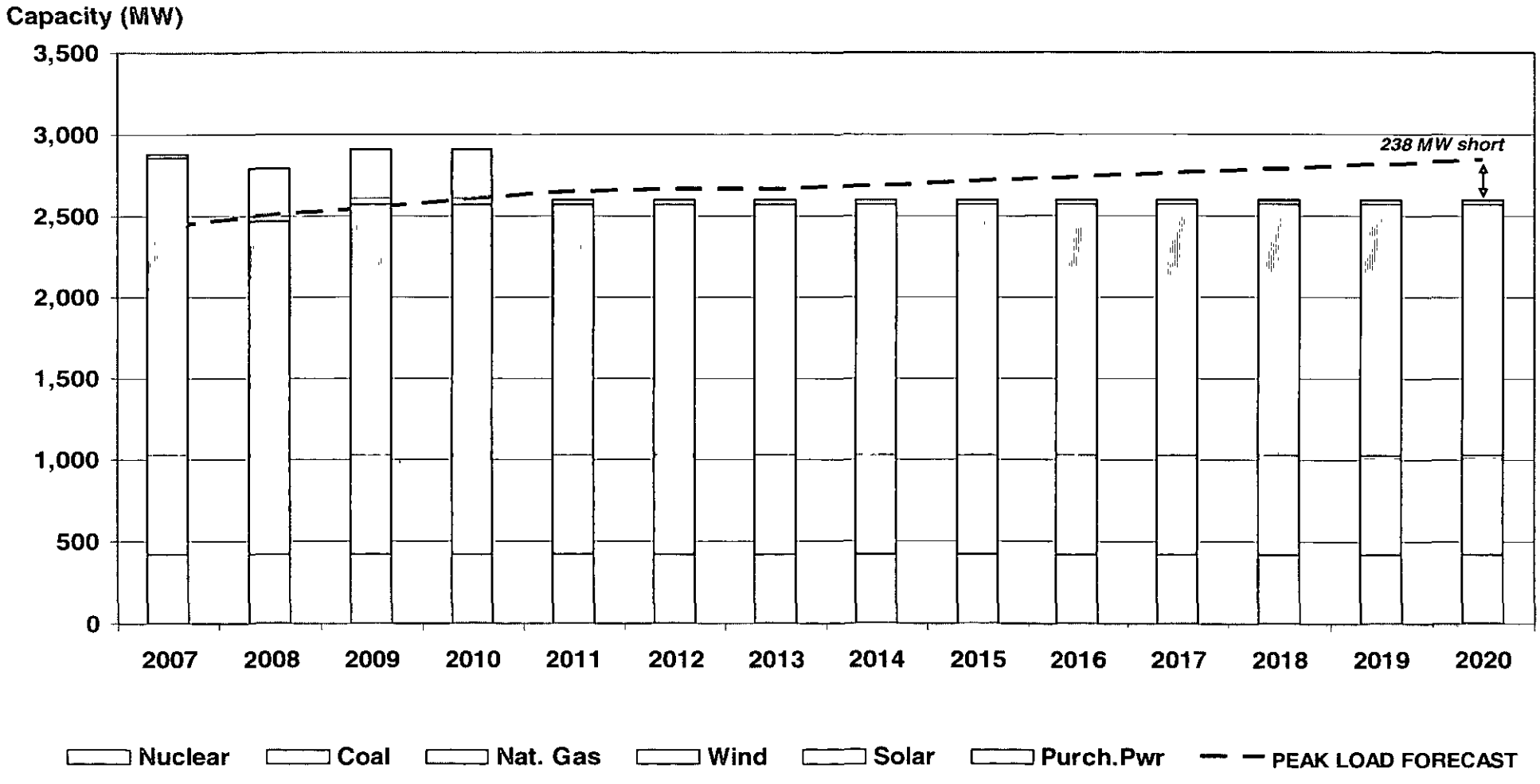
Nacogdoches Biomass Project

City Council Meeting
August 21, 2008

City Council Goals for Austin Energy

- 30% renewables, including 100 MW of solar, by 2020
- 700 MW of energy savings by 2020
- CO_2 cap and reduction plan
- New generation carbon-neutral
- Enhance building codes for zero energy-capable homes and buildings by 2015

Load Forecast with Conservation



Projected New Resources (in MW)

Year	Coal/Nuclear	Gas	Biomass	Wind	Solar
2008	1,029	1,444	12	274	1
2009		100		165	
2010					30
2011				(77)*100	
2012			100		
2013		200			
2014				50	20
2015				100	
2016			100		
2017				(126)*200	20
2018					
2019				50	30
2020				110	
Total	**1,029**	**1,744**	**212**	**(203) 1,049**	**101**

Total Additional Resources **1,375 MW**

*Expiring wind contracts

Project Location

- In Sacul, Texas near Nacogdoches
- East Texas Timber Belt
- State Highway 204
- ERCOT North Zone

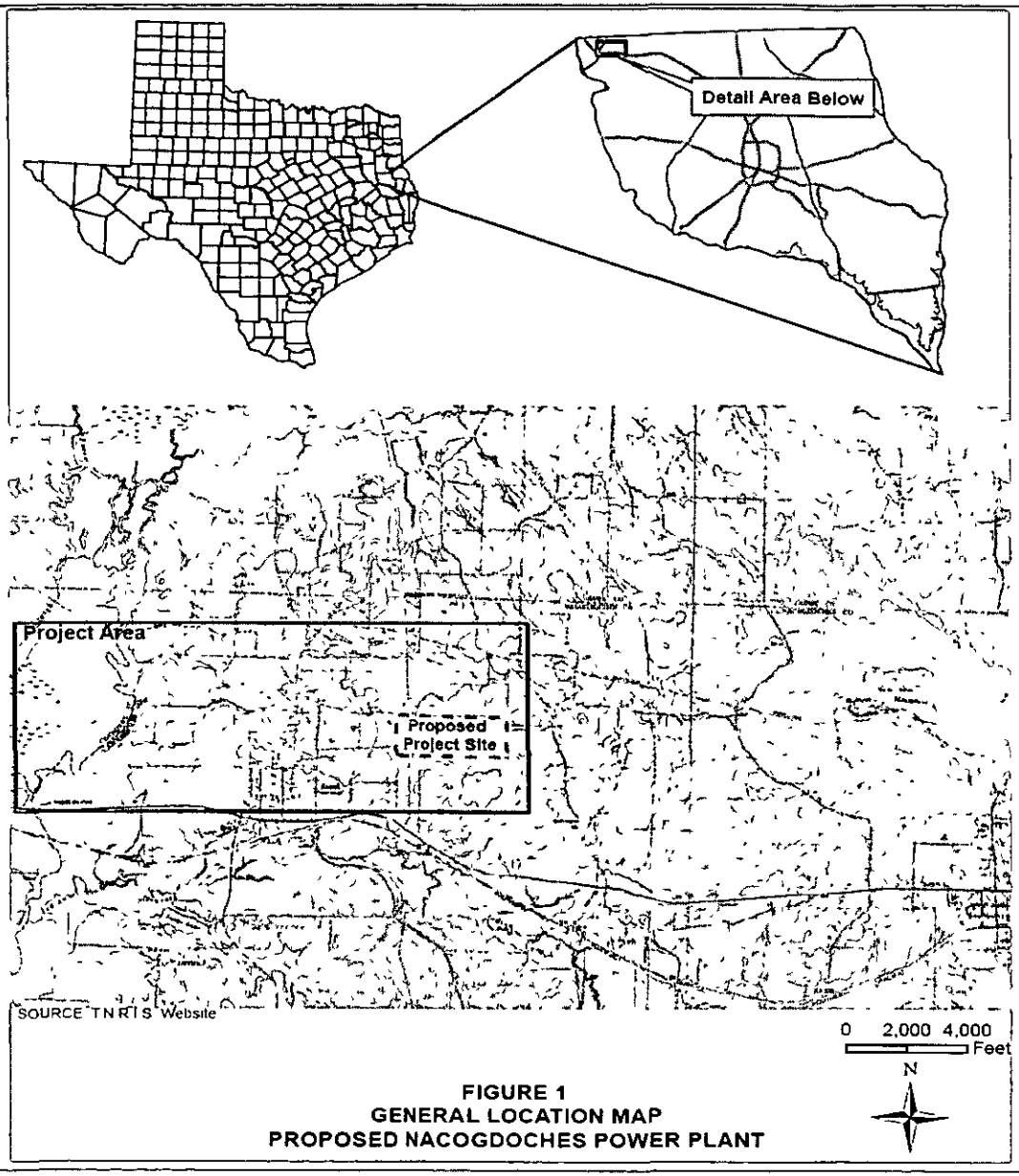


FIGURE 1
GENERAL LOCATION MAP
PROPOSED NACOGDOCHES POWER PLANT

Project Background

100 MW waste wood-fired power generation facility

- **Carbon neutral use of biomass fuel**
- **Wood waste includes:**
  - Forest residue (thinnings / slash)
  - Mill residue (reject lumber, end cuts, sawdust / shavings)
  - Urban wood waste (clearing / trimming, pallets / packaging wood)
- **Approximately 1M tons of fuel per year**
- **Boiler design accommodates variability in fuel**
- **Site is owned and fully permitted**
- **Fuel studies indicate adequate supply – with some under contract**

Background on Nacogdoches Power LLC

- Joint venture between Energy Management Inc. of Boston and BayCorp Holdings of Portsmouth NH
- Focused on developing renewable energy projects
- Developed, owned or operated over 1000 MW of generation including:
  - 15 MW biomass fired in New Hampshire
  - 10 MW biodiesel-fueled internal combustion generation
  - Re-powering two hydroelectric facilities in Vermont
  - 6 natural gas fired electric generation projects
  - 15% share of Seabrook nuclear project
- Recently chosen to develop "sister" project for Gainesville Regional Utilities (Florida)

Benefits

- **Firm & Dispatchable Renewable Resource**
  - High capacity factor (baseload – similar to coal or nuclear)
  - Dependable capacity for covering peak demand
- **Essential for Meeting AE's Renewable Goals**
  - Increases AE's Renewable supply in 2012 to 18%
  - Equal to 250 - 275 MW of wind energy
  - AE's Projected Resource Plan calls for 200 MW of Biomass
    - Need over 500 MW of additional wind (1400 MW total) if not attained
    - or approximately 600 MW of Solar
- **Opportunities for Reduced Cost or Cost Avoidance**
  - Production Tax Credit (PTC) if extended
  - State Fuel Grant if funded
  - Carbon neutrality avoids carbon penalty if enacted

Benefits

- Diversifies AE's Renewables by Type and Location
- Avoids West Texas Transmission Congestion
- Hedge Against Future Carbon Legislation
  - Price equal to gas-based power at carbon cost of $15 - $38/ton
  - European carbon currently trading at $36
- Hedge Against Natural Gas Costs

Projected Fuel Charge Impacts

- **Biomass Project Impacts 2012 Fuel Charge by -2% to +5%**
  - Equivalent to -$1.50/month to +$2.50/month on average residential bill
  - Range is a function of:
    - $8 to $12 Natural Gas
      - More competitive as natural gas increases in cost
    - Availability of Production Tax Credit (PTC)
    - Availability of State of Texas Wood Waste Fuel Grant

- **Fuel Charge projected to increase as much as 40% from 2009 to 2012 based on:**
  - Most fuel costs rising, particularly natural gas
  - Current fuel price estimates $10 natural gas
  - Increased transmission congestion and ERCOT fees

Q&A: Financial

1. What is the payment structure of the contract?

- Capacity Charge
  - Fixed – not subject to construction overruns
  - Proportional to availability
- Fuel Charge
  - O&M with Inflation
  - Fuel
    - Variable
    - Incentives to lower price
    - AE Option to supply fuel
- Total Cap on Contract

Q&A: Financial

2. Are there investment guarantees, loan guarantees, bonds, or other financial commitments from Austin before energy becomes available?

   No.

3. Who owns the Renewable Energy Credits and any other carbon-reducing benefits?

   Austin

Q&A: Financial

4. What will be the impact on the fuel charge?

   Range from -2% to +5.5% starting in 2012

   Green Choice option

5. What is the biggest risk to Austin Energy?

   Replacement energy if plant not completed

Q&A: Financial

6. Is this expensive power?

   Yes, in comparison to current rates
   All future options are more expensive
   Value of base-load renewable energy

7. Why in fuel charge and not base rate?

   All purchase power agreements
   Base rate case could take years
   Green Choice

Q&A: Environmental

8. Will trees be cut to fuel this plant?

   No.

9. Will sustainable forest practices be required?

   Yes

Q&A: Environmental

10. Will "forest litter" necessary for soil nutrients be burned?

    No.

11. What are the air emissions?

    TCEQ permit
    Best available control technology
    CO2 neutral

Q&A: Process

12. Why the rush?

    Equipment costs and "production slotting"

13. Why are we just now hearing about this?

    Been in talks for over a year

    No firm deal until last month

14. Why was this not competitively bid?

    Not required

    Only plant known to be ready

Q&A:

Further Questions?